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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

BIE2024 – INTERMEDIATE MICROECONOMICS
(All sections / Groups)

22 OCTOBER 2018
9.00 a.m – 11.00 a.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **FOUR (4)** pages with **Four (4)** Short Structured Questions

2. Attempt **ALL** questions. The distribution of the marks for each question is given.

3. Answer the questions in the answer booklet provided.

INSTRUCTION: Answer ALL of the questions.

Question 1

(a)   Suppose a monopolist has the following total cost function:
$$TC = 100 + 10Q + 2Q^2$$
where TC is the total cost, Q is the quantity. The monopolist is facing a demand curve of $p = 90 - 2Q$.
Calculate the price, quantity, and profit for this firm's production.   (5 marks)

(b)   Suppose a firm in perfect competition has the following total cost function $TC = 100 + 2q^2$ and the current output price is RM20.
Calculate how much should the firm produce and the profit/loss it will face.
(5 marks)

(c)   An individual firm in the monopolistic market will produce lesser than one in a perfectly competitive market in the long run.
Do you agree? Justify your answer.   (10 marks)

(d)   The less elastic is the demand for a firm's product, the greater is that firm's market power (assume that it is not a perfect competition market).
Evaluate the statement above.   (5 marks)
[Total: 25 marks]

Continued...

Question 2

(a)   Assume that there are only two players in the large jet airliner market, Boeing and Airbus, with the market demand function as below:

$$Q_d = 450 - p$$

where Q_d represents the quantity of demand, and p is the price of the large jet airliner. For simple illustration, assume that both companies have constant marginal cost and the average cost of 152.
Find the

(i)   Nash-Cournot equilibrium, and

(ii)   best-response curve for the market.

Include the necessary calculation in your answer.   (10 marks)

(b)   By using a demand-supply diagram of the labour market, explain the impact on wage during the economic recession (i.e. lower gross domestic product, GDP).
                                                                      (10 marks)

(c)   If a company need to pay RM100 per hour for every worker it hired in production and can sell its product at RM1 for every unit. The total product of the labour shown in the table below:

Labour	Total Product
1	80
2	200
3	300
4	395
5	480

Compute the marginal product of labour and marginal revenue of labour and determine the number of labour should be hired in order to maximize the profit.
                                                                      (5 marks)

[Total: 25 marks]

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Question 3

(a) OPEC, one of the major oil producers' organization, agreed to lower the oil output in order to address the declining global oil price during the negotiation round at end of 2016.

Every member of the organization has two options:

(i) cheating on the agreement and grab the highest profit while others who follow the agreement get the lowest profit, or

(ii) follow the agreement so that everyone gets higher and similar profit than if everyone cheated, but lower than option (i).
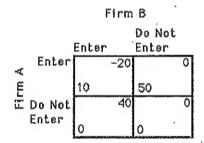
For simple illustration, assume that there are only two parties in the decision-making process: member A which moves first, and other members.

Use a Game Tree to analyse why both parties tend to cheat on each other.

(10 marks)

(b) Though we knew what the best combination of strategies that could generate for each player the highest payoff than the combination in Nash-equilibrium is, the latter combination more often appears in real life than the former. Explain with an example. (10 marks)

(c) The figure below shows the payoffs matrix for two airlines, A and B, of serving a particular route.

Analyse if the Nash equilibrium exists.

Firm B

		Enter	Do Not Enter
Firm A	Enter	-20 / 10	0 / 50
	Do Not Enter	40 / 0	0 / 0

(5 marks)
[Total: 25 marks]

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Question 4

(a)   Externalities can be observed in our daily lives: even a popular restaurant that operates at the roadside will create negative externalities (e.g. traffic congestion in the area nearby when the customers parked their car illegally).

With the aid of an appropriate diagram, illustrate the impacts of negative externalities on social welfare based on the above scenario.   (10 marks)

(b)   The car wash service provided by a car wash centre is creating some dirty waters which become a problem to its neighbour, a restaurant, as many the restaurant loses a substantial number of customers due to the unfavourable environment. Assume that the daily profits made by both businesses are as below:

Car wash centre's service hour	Profit, RM	
	Car wash centre	Restaurant
Not operate	0	500
Half day	400	300
Whole Day	550	50

Illustrate how the Coase Theorem could use to address the issue.   (10 marks)

(c)   "In the presence of a negative production externality, a competitive market will produce more of that good than is socially optimal."

Evaluate the statement above.   (5 marks)

[Total: 25 marks]

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